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ABSTRACT

A study was undertaken to identify (1) the number and types of cooperative vocational education programs offered by postsecondary institutions to students in Colorado and (2) the variables that affect these programs. A two-part survey was conducted at forty-four postsecondary public institutions which included community-junior colleges, area vocational-technical schools, and local school districts with adult vocational education programs. The first part was mailed to the administrators of these institutions while part 2 was sent to the cooperative vocational coordinators. The findings were these: (1) There is an increase in the number of students enrolled in cooperative vocational education programs at the postsecondary level in Colorado; (2) heavy teaching load, insufficient coordinating time, and distance the coordinator must travel are the major problems identified by coordinators; (3) a breakdown in communications within institutions and within the state was a major problem in gathering valid data; (4) the lack of agreement on terminology is a significant factor in communications breakdown; (5) the current full-time equivalent student (FTE) funding is a deterrent to the expansion and implementation of cooperative education programs; and (6) conferences and workshops have brought about a nucleus of well-informed leaders within the state to promote cooperative education at the postsecondary level. (Parts 1 and 2 of the survey form are appended.) (EM)

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Final Report

Project No. 498AH60261
Grant No. G007603722

"A Historical and Descriptive Study of Adult Cooperative Vocational Education Programs in Colorado Postsecondary Institutions."

Charlene R. Collins

University of Northern Colorado

Greeley, Colorado

September 30, 1977

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Occupational and Adult Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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CE 015 238

PROJECT *

Conducted under Part C, VOCATIONAL EDUCATION Act-1963 (as amended)

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PREFACE

Graduate Vocational Teacher Education within the College of Education at the University of Northern Colorado was awarded an USOE Project under Public Law 90-576, Part C, Section 131(a)--Research and Training--of the Vocational Education Act of 1963 as amended. The project entitled Adult Vocational Education Research and Development had three thrusts:

1. Conduct a series of literature searches related to adult education and complete a series of related studied entitled:

   * An Assessment of Characteristics of Cooperative Agreements Between Postsecondary Educational Institutions and Business, Industry, and Labor.

   * A Historical and Descriptive Study of Adult Cooperative Vocational Education Programs in Colorado Postsecondary Institutions.

   * Development of an Instrument to Asses Employer Sponsored Career Development Programs for Sub-Professional Employees.

2. Conduct a Colorado Postsecondary Adult Cooperative Vocational Education Conference at UNC, January 25-28, 1977.

3. Develop instructional modules for the improvement of content and delivery of university graduate-level introductory instruction in adult vocational education.

This study represents the research findings of thrust one concerned with Development of an Instrument to Assess Employer Sponsored Career Development Programs for Sub-Professional Employees.

Louise J. Keller, Project Director Lois W. Bennett, Co-Director

ACKNOWLEDGEMENTS

This research endeavor was guided by the Colorado Adult Vocational Education Research Steering Committee and the Graduate Vocational Teacher Education Research Council at UNC. The staff of Graduate Vocational Teacher Education wish to commend the following individuals who helped us reach our project goals and objectives.

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FOREWORD

As part of its interest in and support of studies in vocational education, The College of Education continues to pursue and engage in research and development activities that contribute to the betterment of vocational teacher education. This research study was conducted by Colorado adult vocational educators, with the assistance of representatives of state educational agencies, Colorado business, industry, and labor.

Dr. Louise J. Keller, Dr. Lois W. Bennett, Professors of Graduate Vocational Teacher Education and Dr. Sam Houston, Chairperson, Professor of Research and Statistical Methodology at UNC are to be commended for their efforts to facilitate the research studies. The university extends special thanks to the following graduate students who have worked as a team the past year on the various adult/postsecondary thrusts: Charlene R. Collins, Edna E. Peart, Anita T. Salazar, Larry S. Warner, and Michael Victor Weerts.

Bruce W. Broderius, Dean
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ABSTRACT

Collins, Charlene R. "A Historical and Descriptive Study of Adult Cooperative Vocational Education Programs in Colorado Postsecondary Institutions." Published Doctor of Education dissertation, University of Northern Colorado, 1977.

Statement of the Problem

This study was undertaken to identify the number and types of cooperative vocational education programs offered by postsecondary institutions to students in the State of Colorado along with the variables that affect these programs.

General Procedure

An initial letter explaining the research was sent to the administrator or campus director of each postsecondary public institution in the State of Colorado. Postsecondary public institutions included: community-junior colleges, area vocational-technical schools and local school districts with adult vocational education programs. Accompanying this letter was a set of definitions and Part I of the survey instrument requesting preliminary information. Upon return of Part I by the administrator, a second letter of explanation, a set of definitions, and Part II of the instrument were mailed to each cooperative vocational coordinator identified by the administrator in Part I. Data were collected, compiled, analyzed, and summarized from the survey instruments returned by the respondents and from informal data collected.

Major Findings

1. There is an increase in the number of students enrolled in cooperative vocational education programs at the postsecondary level in Colorado with the community-junior colleges having the largest number of programs.

2. Heavy teaching load, insufficient coordinating time and distance the coordinator must travel are the major problems identified by coordinators. Weak support by administration and inflexibility of student schedules also ranged among the top five problems.

3. A breakdown in communications within institutions as well as within the State was a major problem in gathering valid data.

4. Interviews and visitations showed terminology to be a significant factor.

5. Current FTE (full-time equivalent student) funding is a determent to the expansion and implementation of cooperative education programs. Faculty workload policies are closely tied with the funding patterns for postsecondary institutions.

6. Within the 1976-77 school year, conferences and workshops have brought about a nucleus of well-informed leaders within the State to promote cooperative education at the postsecondary level.

Implications for Education

The following implications resulted from the study:

1. There is a need for establishing common terminology and definitions.

2. New funding patterns need to be established along with support and commitment by the regulating agencies.

3. Workload policy needs to be examined and modified for instructional personnel. Volunteer efforts will no longer support a cooperative education program.

4. Provision should be made for research and development along with an effective method of evaluation.

5. There needs to be strong institutional support as well as support and participation of the community.

6. There is a need for a combination of centralized and decentralized organizational pattern--centralization for administration to allow for accountability and decentralization for effective program operations within the instructional area.

7. The roles of those responsible for administration and operation of cooperative education need to be defined and the duties and responsibilities clearly stated.

8. Provision needs to be made for leadership training of interested educators for promoting cooperative education.

CHAPTER I

INTRODUCTION

Need for the Study

The goal of vocational education in the postsecondary institution is to educate and train students with a salable skill for occupational success and to assist them in making a smooth transition to mature and responsible individuals ready to assume a role in the business world. To be successful in this role, students need skills, understandings, attitudes, basic tools and competencies (including language arts, social studies, and computational skills).[1]

A national survey in 1971 estimated 21.2 million adults lacked reading skills at the "survival level" such as the ability to fill out a job application form. Another basic criticism of our educational system is that students are not provided with the information and experience necessary to make rational choices about their future. Education ignores the need to do a better job of helping students learn more about and prepare for the world of work. Part of the youth unemployment may be attributed directly to the schools failure to do more to assist youth in entering the world of work.[2]

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[1] Career Education: The State of the Scene (Washington, D.C.: Office of Career Education, 1974).

[2] Ibid.

Gallup Polls and National Institute of Education sponsored surveys showed considerable evidence that young people leave school not fully prepared for the adult world--without the skills necessary to obtain employment or to continue their education; without knowing where their career interest and competencies lie; without proper information on job availability and job requirements; without much information or understanding of what the adult world is really like. Reports of National Commissions found that too many people experience great difficulty in making the school to work transition and the transition from youth to adulthood.[1]

Forces within the business world have demanded changes--frustrated individuals are insisting that industry, labor, business, government, and the community, as well as the educational sector find new ways to meet these needs.[2] Statistics from across the country support the community college as the postsecondary institution that listens and reacts to these demands. Postsecondary youth and adults (where there is a choice) prefer to attend community colleges that are committed to serving their needs.[3]

Through vocational education, postsecondary institutions are capable of turning out individuals able to perform well in the multiple

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[1] National Institute of Education: Career Education Program: Program Plan for FY 1975 (Washington, D.C.: National Institute of Education, 1974).

[2] Career Education: The State of the Scene.

[3] Report of the Advisory Committee on the Schaefer-Kaufman Recommendations Entitled Occupational Education for Massachusetts (Boston: Massachusetts Advisory Council on Education, 1970).

careers within a community. As a postsecondary institution, the community colleges can make a unique contribution by providing the framework through which the necessary basic disciplines can be blended with application disciplines.

Dr. Sidney P. Marland, Jr., former Commissioner, Office of Education, states that at the postsecondary level the community colleges are partially preparing students through a wide range of occupational offerings, combined with academic studies, for the world of work.[1] Education should include knowledge and experience literally related to the world of work. The workplace must be a component of the educational system.[2]

A number of youth have been denied the experiences of examining different types of work in society, of trying different work activities, and of acquiring the necessary skills to enter the workplace in their chosen profession.[3] Instructors have observed their students satisfactorily perform tasks in the classroom identical to those found on the job while at the same time have received reports from employers that these same students are unable to apply that classroom skill to a similar task while on the job.

Public attitude toward education on the 4th Gallup Poll indicated that 44 percent of the respondents wanted their children to get

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[1]Sidney P. Marland, Jr., Career Education, A Proposal for Reform (San Francisco: McGraw-Hill Book Company, 1974).

[2]Ibid.

[3]Gene Bottoms, Career Development Education Kindergarten Through Postsecondary and Adult Levels (Atlanta: Georgia State Department of Education, 1973).

an education "to get a better job." This was seen as the most important goal of education. The 5th Gallup Poll showed that 90 prcent of the responents said school "should give more emphasis to a study of trades, professions and business to help students decide on their careers."[1] One method to improve the education and training of students to "get a better job" and assist them in making a smooth transition from the educational institution to the business world is cooperative education. Government supports the cooperative education concept as an integral part of the academic experiences and as a way of bringing the workplace and the educational institution closer together. Vocational educators in postsecondary institutions need to provide a method, such as cooperative education, for better job preparation and upgrading.

Purpose of the Study

This study will supply information that will show the extent cooperative vocational education is in existence in the State of Colorado, along with coordinator information, program information, and most common problems. Another purpose of the study will be to supply historical and descriptive information on cooperative education and how it relates to career development. This information will assist present and future leaders in planning, implementing, and expanding effective programs at the postsecondary level.

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[1] Career Education: The State of the Scene.

Statement of the Problem

The problem is to identify the number and types of cooperative vocational education programs offered by postsecondary institutions for students in the State of Colorado along with the variables that affect these programs.

Delimitations of the Study

Due to the recent emphasize of educating and training special target groups such as the handicapped, minorities, women, disadvantaged, veterans, etc., research of related literature was delimited to general cooperative education training and not training for any specific group. The study of postsecondary institutions offering adult cooperative vocational education was also delimited to public institutions in the State of Colorado.

Limitations of the Study

Even though a set of terms and definitions accompanied both parts of this survey instrument, some returns and follow-up telephone calls indicated that all the respondents did not use the definitions in completing the questionnaire. Time, cost, and distance limited the number of institutions and personnel personally contacted although maximum effort was expended in soliciting the return of information based on definitions.

Definition of Terms

Adult. Any individual beyond the age of compulsory school attendance who is not attending full-time public school. In Colorado, the minimum age is 16.

Advisory Committee. A group of persons representing employers and employees of business and industry actively involved in jobs relating to the occupational training program and organized to advise those responsible for planning, implementing, and maintaining vocational education programs.[1]

Alternating Cooperative Plan. An organizational plan of education which allows two students to hold one full-time position by exchanging work and study schedule.

Basic Skills. A functional level in reading, writing, speaking, and mathematics.

Business. Nonindustrial firms engaged primarily in services and trade.

Career. The totality of work one does in his/her lifetime.

Career Development. An on-going process beginning with birth which includes experiences that significantly influence his/her career choices.

Career Education. A system of education which focuses on the development of individuals for their social and economic roles in life: paid employment role, citizenship role, home/family role, and avocational/ leisure role.[2]

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[1] Guide for Cooperative Vocational Education (Denver: State Board for Community Colleges and Occupational Education), p. 1:7.

[2] Louise J. Keller, "A Career Development System--A Point of View," (Greeley), pp. 5-6. (Mimeographed).

Community-Junior College in the State of Colorado. A state or local approved institution designed to meet a variety of needs such as: transferable programs; occupational programs; community and personal service programs; associate degree programs; and certificate programs.

Cooperative Education and Cooperative Vocational Education Programs. An instructional process or method which integrates the students' occupational preparation with a work-related experience. The purpose of Cooperative Vocational Education is to prepare students for specific areas of employment. The following criteria identify this educational process:

a. Institutional approved
b. Classroom instruction
c. Distinct education/work related
d. Paid employment
e. Specific job forms
f. Cooperative Training Agreement and Plan

Cooperative Vocational Education Coordinator. A member of the school staff who holds a vocational credential, teaches the related and/or occupational subject matter involved in cooperative on-the-job training programs, and coordinates the classroom instruction with the training in the field. May also be a part of the school administrative staff who coordinates all cooperative vocational education programs and may not be involved in teaching.

Education/Work. Describes a variety of arrangements, either paid or unpaid whereby students are involved in real work environments. It includes:

a. Cooperative education
b. Work study
c. Work exposure
d. Work experience

Extended-Day Plan. An organizational plan of cooperative education which permits employees to participate in specially designed work/job related education.

Industry. Firms engaged in trade or manufacturing activities.[1]

Job Entry. Competencies which are required or desired of applicants by an employer for initial employment.[2]

Parallel Plan. An organizational plan of cooperative education which allows a student to work part time and attend school/college part time.

Postsecondary Institutions. Public supported institutions which serve adult learners and are classified as:

a. Community-Junior Colleges
b. Area Vocational-Technical Schools
c. Local school districts with adult vocational education programs

Training. Instruction of various types which is relatively narrow as compared to "education"; has skill development in a specific area as its primary objective.[3]

Training Agreement. An agreement which delineates the responsibilities of the student-trainee, the employer, and the coordinator (or institution).

Training Plan. A detailed listing of jobs and tasks which the student-trainee shall be expected to perform.

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[1]Harlan D. Huston, "The Nature and Characteristics of Business Education and Training Offered by Business and Industry in a Metropolitan Area with Implications for Community Colleges," (Ph.D. dissertation, University of Northern Colorado, 1976), p. 9.

[2]Ibid.

[3]Ibid.

Training Station. The place of business or an industry which provides occupational training on the job based on a training agreement and a training plan.

Work. The productive expenditure of one's time, energy, and capabilities for the benefit of self and/or others. This includes paid and unpaid.

Work Exposure. A limited involvement program which provided students the opportunity for formal observation of career settings. The program provides students an opportunity for structured observations of on-site situations as well as association with community employers/ employees and professional/trade/service organizations.

Work Experience. An arrangement recognized by the college or institution whereby students undertake employment experiences, generally paid, for a predetermined purpose. Usually is not structured to meet an educational objective but is usually to allow students to achieve outcomes, generally self-determined.

Work Study. A school/college program designed to provide financial assistance through part-time employment with public non-support employers. Designed as a financial aid in continuing a student's education. May or may not be related to the student's occupational objectives.

Summary

The American public supports the goal of postsecondary vocational education to educate and train students with a salable skill for

success in the business world. Reports support the fact that too many people are unable to make a smooth transition from youth to adulthood or from their role as a student to a new role in the business world.

The community college is the institution most often chosen by postsecondary youth and adults to administer the wide range of occupational offerings and academic studies that will prepare them for the world of work. This educational institution is capable of turning out individuals able to perform well in multiple careers as they provide the framework through which basic disciplines can be blended with application disciplines.

One method of blending basic disciplines with application disciplines in training students for their work role is through cooperative education. Cooperative vocational education provides for job preparation and upgrading, and is recognized as a viable educational concept for bringing the world of work and the educational institution closer together.

CHAPTER II

REVIEW OF RELATED RESEARCH AND LITERATURE

To establish a base in support of adult cooperative education at the postsecondary level, the literature was reviewed under the following three major areas of emphasis:

1. Career Development. This area of review focused on school-based programs concerned with experiences that significantly influence an individual's career choice. This is referred to in literature and legislation as career education or career development education.
2. Cooperative Education. The second area focused on cooperative education and cooperative vocational education as a viable method of integrating a student's occupational preparation with a work-related experience.
3. Community College. This section of the review of literature focused on the community-junior college as the postsecondary institution most involved in cooperative education training for adults in the State of Colorado.

Career Development

The Georgia State Department of Education issued a report based on the importance of fusing career development into all levels of the educational structure in order to make more meaningful experiences for

all students. Career development education can help students who are falling into the growing gap between school experiences and the real world when they find themselves without the necessary competencies to develop and manage their career lives.

Career development education is designed to accomplish tasks of increasing levels of maturation that relate to occupational and educational adjustment and job and educational advancement. It is an integration of the old and new into a new "set" for education; it will make education accountable for equipping each individual for a paid career. It will pervade all levels of education and will focus on the whole individual. The elements of career development will provide a system of experiences that will culminate in accomplishing career objectives for each individual.[1]

Individuals have become more insistent in choosing and creating career goals that they consider to be of value to themselves and to society. Career development is a term with wide parameters--it does more than just focus on matching the person to the job and developing specific job skills. It emphasizes the process of career decision making more than the decision; it emphasizes career patterns over a lifetime rather than a choice at a given time. Emphasis is on psychological as well as logical aspects of work; on developmental stages rather than on one-time decisions; on self-development rather than on just occupational development.[2]

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[1]Gene Bottoms, Career Development Education Kindergarten Through Postsecondary and Adult Levels (Georgia: Georgia State Department of Education, 1973).

[2]Lorraine Sundal Hansen and Wesley W. Tennyson, "Career Development as Self Development: Humanizing the Focus for Career Education," Social Education, May, 1975, pp. 304-9.

Career development education may help the community college presidents with one of their major problems--the thousands of students who show little sustained interest or ability in academic studies but avoid vocational education as though it were a plague. Most of these young people decided on college because they want "to work with people rather than with things." They expect high incomes and don't want to do the "dirty work." This expectation gap was almost a "yawning chasm" in 1974 in the lives of thousands of unemployed and underemployed people and may well grow into millions during the decade. Career development may set a new image for occupational programs at the community college level and discourage students choosing transfer programs which lead to no jobs.[1]

Today we find ourselves in an era where people are "recycling" their lifestyles and careers in order to find a more satisfying life, and early retirement is an additional incentive for this recycling. Career hopping is now considered normal for workers. The target population for the seventies may be the middle aged or those traditionally defined as in mid-career. The middle years have become an exciting period during which skills, interests, and options continue to develop. There is also a marked increase in second careers for people in general, particularly for those over 35. Eli Ginsberg (1972), a specialist in career development, recently changed his theoretical assumption and now

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[1]Norman C. Harris, What are Community College Presidents Thinking About (Michigan: Michigan University, 1975).

believes that the choice process is coexistive with a person's working life.[1]

Career development is an on-going process throughout one's life and the ability to negotiate and renegotiate for a position are a part of this. The person who has spent time searching for power, money, or responsibility may now, at age 40, desire to search for relaxation and/or meaning. On the other side, one who has concentrated on finding pleasure may feel a need to focus on responsibility. Individuals contemplating a promotion, seeking a career change, or faced with retirement may need assistance before possibly discarding a lifestyle that could be recycled.[2]

Knowledge about the ever-changing world of work, skills for use in employment, positive attitudes toward work and the means to obtaining further education, training, and guidance throughout the life of the individual are all a part of career development. Individuals, when making that first career decision or changing their present career, should have access to information, guidance, and training to enable them to progress in their chosen careers. Career development goals apply to all students at varying levels of job preparation.[3]

The Wisconsin State Department of Public Instruction lists a set of comprehensive career development goals and the means for accomplishment. They are as follows:

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[1]Ronald W. Hoenninger and Thomas M. Skovholt, "Recycling Careers--A Community Service Response," Community and Junior College Journal, May, 1973, pp. 22-23.

[2]Ibid.

[3]Dorothy Knoell and Charles McIntyre, Planning Colleges for the Community (San Francisco: Jossey-Bass Publishers, 1974).

1. To develop self-awareness and positive attitude toward self. To be accomplished by:

   a. being alert to opportunities to compliment students and to help them find their strengths and develop self confidence.
   b. offering criticism in a constructive manner and helping them assess their skills.
   c. being alert for opportunities to develop human-relation skills.
   d. stimulating work situations in order to stress the importance of cooperation among workers as well as between employer and employee.
   e. using vocational student groups to develop positive attitude.

2. To develop occupational awareness and positive attitudes toward work by:

   a. relating learning to the outside world.
   b. acquainting students with job descriptions which utilize the skills they are being taught.
   c. stressing the relationships between vocational subjects and the world of work.
   d. using representatives from business and industry to bring the outside world into the school.
   e. discussing related occupations and the opportunities for personal choice.
   f. keeping up to date on employment trends and applying this information in helping students develop job skills.

3. To provide exploratory work experience through:

   a. providing a sound basis for making career decisions.
   b. providing exploratory courses.
   c. discussing case histories of people in the field.

4. To provide job preparation.

5. To provide career guidance, decision making experiences, placement and follow up by:

   a. insuring that course work is augmented with job development and counseling.
   b. providing decision-making experiences.
   c. informing students of job-entry requirements.
   d. expanding contacts with business, industry, labor, and government.

e. including the skills of discovering job openings, securing appointments for interviews, completing resumes and applications.
f. strengthening the program through follow-up studies.[1]

A goal not included by Wisconsin is job placement. The growing interest and recent developments in higher education point toward a possible reevaluation of this goal. The dispursement of career information as a part of a planned career development program has many times been a by-product and not a planned and coordinated activity. Part-time student employment has been ignored as a career-building device. The necessity of an effective, strong placement program has gone unrecognized and the absence of relevant philosophy has resulted in lackadaisical commitment to students and employers.[2]

There must be career development in preparation for employment. With only five percent of the jobs in the work force unskilled, the large majority of students will need career training if they are to compete effectively in a society which no longer has use for their "backs." Facts presented showed that the U.S. dollar paid to a person for non-production is 100 percent inflated and every dollar paid to a worker who produces less than he can and should is inflated to the extent of that time that the worker is unproductive. Youth must be educated to enter the world of work with effective skills, technological knowledge, work habits and attitudes that will enable them to be successful. The role of the United States as a nation is affected by our attitudes and competencies.

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[1]Robert S. Meyer and others, The Vocational Educator's Role in Career Education (Madison: Wisconsin State Department of Public Inst.

[2]Van Parker, "Placement Programs: A New Philosophy," Community and Junior College Journal, February, 1975, pp. 30-31; 34.

Brookings Institute reported that the United States is last of all the developed nations in terms of growth rate and real output per man hour. The U.S. had been at the top of the list, but in the past ten years we have been paying ourselves about seven percent more per year in wages and producing only one to two percent more. No currency can possibly maintain its value in the face of such a difference between growth and productivity and increase in salaries.[1]

In a 1973 survey, Michael Wollman found that 63 percent of the clientele in some two-year colleges were either not satisfied with their career choice or were fairly satisfied but felt they still needed help with planning. Curriculum was designed to help students become aware of a decision-making process they could apply to their own careers; to help them specify several occupational areas of interest and to help in self-assessment to determine their chances of success in these areas.[2]

In Illinois, career development is helping to develop attitudes about the personal, psychological, social, and economical significance of work. Career development provides individuals with the opportunity to develop the knowledge, skills, and attitudes needed for employment in an occupational area. Goals for a postsecondary institution include:

1. preparation for job entry or further education.
2. placement of students.
3. follow-up studies for program evaluation.
4. guidance and counseling.
5. assistance to students in making occupational adjustments.
6. instruction which leads to specialization.
7. programs which lead to supervisory and management positions.

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[1] Ibid.

[2] Michael Wollman, Diane A. Johnson, and James E. Bottoms, "Meeting Career Needs in Two-Year Institutions," Personnel and Guidance Journal, May, 1975, pp. 676-679.

8. programs for areas which require technical knowledge.
9. increased motivation by relating occupational experience to the world of work.[1]

The Lakeshore Technical Institution also stressed career development education be integrated into existing curricula. Career development skills should include communication skills which are developed in composition, speech and media. Students should explore values and attitudes of the work ethic--all are essential to a workers' potential training, advancement, and stability within his career. Curriculum must be designed to include job development skills, attitudes, and values to help the individual live successfully in today's fast-paced and rapidly changing world.[2]

Cooperative Education

In 1906 when cooperative education was first inaugurated by Herman Schneider, School of Engineering, University of Cincinnati, there were less than two dozen students in the program. Expansion was slow but steady until the early 1960's when a combination of forces pushed it onward. Education, along with other societal institutions, was forced to reexamine its goals and objectives. In 1968, Congress appropriated federal funds for cooperative education through an amendment to the Title IV-D of the Higher Education Act of 1965. This strong public support through federal legislation, combined with National Commission for Cooperative Education funds from the Kettering Corporation and the

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[1] An Aid for Planning Programs in Career Education (Springfield: Illinois State Board of Vocational Education and Rehabilitation).

[2] Career Education Guide: K-14 (Sheboygan: Lakeshore Technical Institution, 1972).

Ford Foundation, more than doubled the number of institutions offering cooperative education.

Cooperative education, as perceived, planned and operationalized by different individuals and institutions has no simple or consistent structure, purpose, philosophy, or objectives. Studies indicate various purposes, goals, and priorities including:

1. Providing students opportunities for career exploration.
2. Providing students with technical skills and experiences.
3. Allowing for introduction to the world of work.
4. Providing practical "human relations" training.
5. Providing the opportunity for students with low incomes to attend college by providing additional income from cooperative job earnings.
6. Providing a basis for schools to compete for students with less expensive schools by offsetting tuition differentials.
7. Providing a means of breaking down traditional barriers of sex and minority.[1]

Cooperative education and work experience programs have blossomed at the college level institutions. Programs increased from 35 in 1960 to 225 in 1971. By 1974 there were nearly 400 with 200 more in the planning stage. Enrollments increased 145 percent during the period of 1967 to 1972.[2] At the present time there are over 1,000 colleges offering cooperative education with 200,000 students enrolled from the 50 states. It is estimated that by 1980, 500,000 students will be enrolled in these programs. Federal appropriations to support the initiating or strengthening of programs have been at an annual rate of $10,000,000 since 1973.[3]

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[1] Cooperative Education Planning Study: Final Report (Pittsburgh: Consad Research Corporation, July, 1975).

[2] Career Education: The State of the Scene.

[3] National Commission for Cooperative Education Purpose and Program (Boston).

Cooperative education creates a real-world atmosphere while the student is still enrolled in school. It acts as an orientation to the minority or disadvantaged student who has never been inside an office building and to the student from the white-collar family who has never been inside a manufacturing plant. It enables the student from one part of the U.S. to become socially aware of life in the opposite corner of the country. It assists students in making the transition to a mature and responsible individual ready to assume a role in society.[1]

It is important that educators accept the responsibility of social and economic change for the benefit of the individual as well as the broader society and to provide a meaningful curriculum for all. However, it is also important to remember that all knowledges and skills from one generation to the next are not totally within the purview of the schools.[2] It must be recognized that preparation for a career involves not only the schools but the business and industry sector as well. This preparation for a career is the price tag of the technological age. "What we have, where we are--this is our human heritage."[3]

Traditional barriers are broken as cooperative education supports the concept that classrooms aren't the only places to learn. Cooperative education is a mixture of classroom and practical work experience in preparation for a career. It represents a three-way partnership

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[1]Edgar D. Draper, "Cooperative Education," Community and Junior College Journal, August/September, 1973, pp. 26-27.

[2]Report: National Conference on Cooperative Education Washington, D.C.: Bureau of Occupational and Adult Education, 1975).

[3]Byrl R. Shoemaker, "Vocational Education Helps to Humanize the Curriculum" (paper presented at the Annual Meeting of the North Central Association, April 6-9, 1975).

among students seeking study-related work experience, employers providing for the students and educational institutions committed to supplying both the academic and administrative support necessary.

Charles F. Seaverns, Jr. of Northeastern University says:

> Cooperative education is an unique educational process designed to enhance optimum individual adjustment toward self-realization and career development by means of integrating classroom study with planned and supervised practical experience in vocational, educational, or cultural activities outside of the formal classroom environment.[1]

In 1974 the American Vocational Association stated that youth is detached from the occupational world because of a number of present-day conditions which combine to make the transition from youth to adult worker status unusually difficult. Some of the conditions contributing to this appear to include vocational indecision among the community college students and access to limited and stereotypic occupational information. A lack of correlation also exists between students' educational plans, their decisions, and their occupational histories. Many students enter full-time work in fields unrelated to their educational training. To counteract this, there has been a recent shift which supports the need for career development counseling early and for complete and up-to-date occupational information to be continuously available. Through cooperative education, the educational institution can assist in providing opportunities for reality testing both in the institution and in the community, striving to nurture occupational awareness and vocational self-identify.[2]

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[1] Cooperative Education Planning Study: Final Report (Pittsburgh Consad Research Corporation, 1975).

[2] Melvin L. Barlow, ed., The Philosophy for Quality Vocational Education Programs, Fourth Yearbook of AVA (Washington, D.C.: AVA, 1974).

The Subcommittee on Education of the Committee on Labor and Public Welfare in 1968 stated that the part-time cooperative plan is undoubtedly the best program in vocational education. It pointed out that the program consistently yields high placement records, high employment stability, and high job satisfaction.[1] In a study for the Office of Education, the Battelle Memorial Institute found employers favored applicants who had participated in a cooperative work experience program. Education for any level should be evaluated in terms of how ready a student is for taking the next step; in vocational education that next step is crossing the bridge to the world of work. It is mandatory for our educational system to include activities to meet the needs of students and business and industry. Students should be given the opportunity to understand the working world by extending the classroom walk to the community through some type of cooperative education.[2]

Greater emphasis is now being placed on the cognitive and affective aspects of a job and less on motor skills. Blue collar jobs are on the decrease and students applying for these jobs must be better prepared. Society has placed the responsibility of preparing individuals for jobs in the hands of the schools. Our postsecondary institutions must meet the challenge of helping students develop the ability to cope with technological change by being available for retraining and additional training. Schools must provide an environment from which students can obtain all the necessary skills, knowledges, and attitudes necessary for successful employment.

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[1] George L. Brandon, ed., A Montage of the Mid-Seventies: Issues and Concerns of Vocational Education, Writings of Graduate Students: II (University Park: Pennsylvania State University, 1975).

[2] Ibid.

The goal of cooperative education at the College of San Mateo in California is to close the gap between "town and gown," between theory and practice; by expanding the college into the community; by creating a channel of communication; and by changing the curriculum in response to the needs identified in the world of work. It is a vehicle for forming closer bonds between the college and the community and has resulted in an interlacing of college and industrial facilities, equipment, personnel, and knowledge.

Cooperative education has helped solve a major problem which has been a long-time concern of industry--that of training students on obsolete equipment because of school budget constraints which make upgrading of expensive equipment difficult. Cooperative education students receive classroom instruction and laboratory experience on campus followed by work at the industrial site.

The business community profits from the liaison of cooperative education by having employees who are knowledgeable about theory while at the same time producing goods and services. Students and institutions benefit through direct application of classroom theory at work-training stations. Students no longer feel isolated from the "real world" and the integration of the academe with the workplace has provided the student with a meaningful experience and the awareness of relevant education.[1]

Cooperative education is one of the most effective educational patterns for achieving affirmative action in employment. Integrated

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[1]Lois Callahan and Vern Gillmore, "Cooperative Education, An Articulating Agent," Community and Junior College Journal, February, 1974, pp. 32-34.

classrooms and integrated job opportunities result in a better understanding of the ethnic problems. Businessmen have a better insight into the abilities and potential of the people who will lead our nation in the future. The dropout needs encouragement for a second opportunity; cooperative education is that opportunity. All age groups should be encouraged to take part in some type of cooperative education or education/work program--from the retired person to the seventeen-year old youth; from a fireman to the president of a firm; from the person who wants to come to college for the first time to the one who comes for a different degree. Cooperative education should be an encouragement to all. The cooperative education program should further its creative, imaginative effort to open repositories of people and resources to their fullest.[1]

Based on several reports, the federal government's point of view supports cooperative education as a viable concept of the United States from financial aid to a way of quieting unrest to an integral part of the academic experience. Cooperative education is a key component of a sociopolitical and educational phenomemon--that of life-long learning combining work and education in a mutually reinforcing experience. For these many reasons, cooperative education has evolved to its present status of acceptability and respectability.[2]

Studies show cooperative education to be the center of innovative practices in higher education. Some trends shall bring:

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[1]Edgar D. Draper, "Cooperative Education," Community and Junior College Journal, August/September, 1973, pp. 26-27.

[2]Louis W. Bender and others, Cooperative Education: Conception to Credibility (Florida: Center for State and Regional Leadership, 1975).

1. improved educational experiences for students.
2. direct participation in community activities while in college.
3. specialized training not possible in traditional classes.
4. financial earnings to aid in the high costs of education.
5. increased success for non-traditional students through the combination of college classroom studies and off-campus paid work experience.[1]

Another trend found in the literature included rapid growth in occupational programs with work study (closely articulated) as an alternative route for many students. This will establish a closer relationship with the employers in the community. It was also stated that the proliferation of occupations and of curriculum may force students into early career decisions.[2]

Changes in our educational program are being demanded by students, minority groups, business and industry, and expanding diversified population, and technological advances. Although cooperative education is clearly not a product of the "space age," it appears to be totally accepted as a relevant educational practice by all concerned. Statistics show that between 50 and 85 percent of the students in the various career programs encompassing the work experience concept have taken full-time employment with cooperating employers, as well as the

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[1]L. G. Ferguson and others, The Assessment of Business and Industry Needs: Phase II of Multi-County Assessment of Adult Needs Project (MAP) (Texas: McLennan Community College, 1975).

[2]Angelo C. Gillie, editor, "Post-Secondary Occupational Education: An Overview and Strategies" (papers presented at the Pennsylvania Conference on Post-Secondary Occupational Education, Pennsylvania State University, 1970).

need to triple the number of schools offering cooperative work in the next decade.[1]

In connection with the National Career Guidance Week in 1974, President Ford proclaimed that there was no greater responsibility than that of helping young Americans find their way to productive and personally rewarding jobs. America's industry, labor, professional, and community leaders were asked to join with the educational institutions to help prepare students for life by helping them make more realistic and rational decisions about their occupations.[2] Cooperative education is the "unique educational process designed to enhance optimum individual adjustment toward self-realization and career development by means of . . . classroom study . . . and practical experience . . ."[3] It is a partnership between America's industry, labor, professional and community leaders and the educational institutions.

Comprehensive cooperative education can shoulder the responsibility given to the American people by President Ford in 1974--that of helping young Americans find their way to productive and personally rewarding jobs. Through cooperative education, or another education/work program, students enhance self-development, self-confidence, sense of responsibility and economic independence. It reduces the number of

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[1] Ibid.

[2] Dean H. Jones, A Proposal for an Occuptional Information Center at Gaston College (Nova University, 1974).

[3] Cooperative Education Planning Study: Final Report (Pittsburgh: Consad Research Corporation, 1975).

failures and dropouts and facilitates the placement of students as they complete their education.[1]

Results from a year-long study on the education-to-work transition focused on the barriers that make this transition so difficult along with mechanisms that link education and work to provide for a smooth transition for individuals as they move from one to the other. The theme throughout the study was that education and work are and should be distinct; that the two worlds should be brought into alignment without sacrificing the functions of either.

It appeared from the study that educators are placing greater emphasis on efforts to align the exit requirements of one system with the entry requirements of the other. Both educational personnel and the business industry have traditionally paid more attention to process rather than outcome. Educators and lay people are now beginning to turn their attention not only to the outcomes of the educational process but to the alignment of those outcomes with occupational entry requirements. There are certain barriers that may hinder the transition process. These are as follows:

1. fluctuating requirements.
2. development and use of manpower and job requirement information.
3. credentialing, licensing, and certification procedures.
4. authority and control.[2]

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[1]Asa S. Knowles and associates, Handbook of Cooperative Education (San Francisco: Jossey-Bass Publishers, 1971).

[2]Bridging the Gap: A Study of Education-to-Work Linkages: Final Report of the State-Level Study in Career Education (New York: College Entrance Examination Board, 1975).

The education-to-work supplemental report provided a comprehensive review of a system of learning that permits individuals to transfer from education to work (or work to education) with a degree of ease. Important components of the system(s) were:

1. job placement services.
2. more relevant curriculums pertaining to actual job tasks.
3. student returning to educational institution for seminars to integrate work experience with educational program.
4. follow-up studies.

In conclusion, the report states that career development covers an endless variety of activities that combine education and work, some tipping the scale more one way than the other. For an education-to-work linkage to be effective, a balance must be maintained that is rewarding to both--if the linkage is not rewarding to the student, an important learning opportunity will be lost; if it is not rewarding to the business or industry segment, it is unlikely that they will sustain their commitment.[1]

In support of the education/work concept, cooperative education has three organizational plans which have proved to be effective in linking education and work--alternative, parallel, and extended day. Each contains the necessary link between the on-campus instructional program and the field experience provided by a business or industry and each provide regular work experience related to college studies and career goals.

The alternative plan allows two students to hold one full-time position by exchanging work and study schedule. The parallel plan is

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[1] Bridging the Gap: A Selection of Education-to-Work Linkages: Supplemental Report of the State-Level Study in Career Education (New York: College Entrance Examination Board, 1975).

coordinated to allow a student to work part time and study part time. The extended-day organizational plan includes special arrangements for college studies related to full-time employment. Trends achieved through these three organizational plans include:

1. relevant educational experiences.
2. direct participation in the community while attending college.
3. socialized training not possible in educational institutions.
4. financial support for college costs.[1]

Cooperative education continues to receive priority in the Office of Education. It is the core of many initiatives and is expanding to meet the career development objectives. The Division of Vocational and Technical Education also gave priority to the further development of cooperative education at a national meeting in order to give clearer direction to utilizing community resources in preparing people for employment.

Dr. William F. Pierce, Sr. Deputy Commissioner of the U.S. Office of Education for Support Services, points out that cooperative work experience is a joint effort. It is important for educators, representatives from business, industry, and labor to understand and be committed to "education which uses the streets and highways as hallways to classrooms in shops, stores, offices, factories, and service agencies in the community." Employers consume the products of vocational education and they, with organized labor, are the critics, supporters,

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[1] New Horizons in Cooperative Education: Project Report (San Mateo: San Mateo Community College, 1974).

and bystanders of any effort of preparing students for employment. Cooperative work experience can only be successful through joint efforts of all concerned with the future manpower needs of society.[1]

The unions are concerned with the future manpower needs of society. Youth of today are tomorrows union members and need labors' encouragement and assistance. Unions are part of the cooperative education team, and all partners must seek to develop future workers who not only perform their job satisfactorily but who also have the educational background for advancement as well as being able to cope with occupational mobility. Cooperative education for many will be the capstone to formal career education; it will be the bridge on which these students must rely for achieving active membership in the labor force. This will only be accomplished through joint efforts.

The Community College

The emergence and rapid growth of the community college was an answer to the call of the American public for universal and inexpensive education. This growth can be attributed to the interaction of three major factors: the idea itself, the constant increase in economic wealth in the United States, and the social phenomenon known as "The American Dream" that education is a social and individual good that society is obligated to provide.[2]

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[1] Report: National Conference on Cooperative Education (Washington, D.C.: Bureau of Occupational and Adult Education, 1975).

[2] James W. Thornton, Jr., The Community Junior College (New York: John Wiley & Sons, Inc., 1972), pp. 46-49.

One third of all students who enter higher education today enroll in a community college.[1] The ability to attract these students is because of where they are, what they are, and why they are. The community colleges are accessible in terms of location (one-hour travel time), open-door admission policy, and cost of education. They also have open-ended curricula that adapt, expand, and provide innovative methods of instruction. Their challenge is to prepare large numbers of persons for steadily increasing career options while at the same time giving them insights into themselves and their society.

For the community colleges in the 70's, the curriculum spectrum covers two categories--academic and vocational. The academic (or university parallel) program consists of lower division courses that will prepare the student for further study at a four-year college or university and will earn him an Associate of Arts Degree. The vocational curriculum includes courses of two years' duration or less designed to prepare a student for immediate employment upon completion of the program. The move towards vocational education reflects the change and expansion of the American college system as a change in the structure of our economy is seen. Between 1950 and 1970 the population of technical and professional workers in the labor force rose from 7.1 percent to 14.5 percent. Much of this increase occurred among fields which frequently require more than high school education but less than a bachelor's degree.[2]

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[1]Jerome Karabel, "Community Colleges and Social Stratification," Harvard Educational Review, XLII (November, 1972), pp. 521-562.

[2]Bureau of Census, The American Almanac (New York: Gossett & Dunlap, 1971a), p. 225.

The community colleges have been the key figure in providing the manpower for this growth. If current predictions of occupational trends are correct, they are likely to become indispensable in supplying the labor market with manpower in the next few years. Changes in the labor force laid the groundwork for a two-year community college designed to carry out the philosophy of "equal opportunity through education."

Final evidence in support of community colleges is given by the federal government. The government has recognized them as being a legitimate part of higher education and eligible to receive federal aid and subsidies.

Present society looks to the two-year postsecondary community college as a key to a better life which is the major single reason students seek further education at the community colleges--to acquire the skills and/or training necessary to enter the world of work and at a higher level. A 1972 Time survey showed 79 percent of college students believe that commitment to a work career is essential. Youth and adults are more serious about work than they have been and this is reflected by increasing enrollments in job-preparation programs at the postsecondary level.[1]

Community colleges have begun to respond to society and to the needs of a heterogeneous population by implementing programs to prepare individuals for gainful employment. The nation's community colleges offer growing opportunities for students.

Another challenge facing the two-year college is a new order of individual and social need for education along with the demand for

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[1]Edwin L. Kurth, "Vocational Education for Postsecondary Schools--What's Ahead???" Journal of Industrial Teacher Education, Winter, 1974.

accountability which faces all levels of education. In serving the new order of individuals--the "now generation," the continuing adult, and future generations, community colleges can meet the demand for relevance between the academic world and the world of work which has caused a state of "future shock." The victims of this "future shock" are those individuals who are unable to cope with rapidly increasing rates of changes in our society. There is, and will continue to be, an increasing demand on people, the economy, and societal institutions to help.

One method used by community colleges in helping students cope with technological changes in our society and preparing them for the world of work is cooperative education. It helps provide for greater flexibility in training students with the skills and education necessary for successful employment. Cooperative education makes a unique contribution by blending basic disciplines at the institution with application disciplines at a work station in the business or industry sector.

Cooperative education in the community college is not the property of one department, but is geared to a range of student needs--from vocational-skill preparation to career search; to a broadly defined personal development program. Career consciousness becomes a reality as experience in business or industry is integrated into all programs. A merger between the employer in the community and the two-year institution through cooperative education provides an important service to the needs of the people--the relationship of separatism between "town and gown" gives way to a harmonious partnership in the service of community

need. The lines of demarcation between education and the workplace are diminished by the philosophical and operational patterns of the community college.[1]

Cooperative work experience programs help community colleges meet their challenge and responsibility. These programs help students meet some of the following objectives:

1. enhancing self development.
2. developing self confidence.
3. developing a sense of responsibility.
4. developing economic independence.
5. choosing and preparing for a career.
6. understanding classroom studies.
7. supplementing general education.
8. acquiring direction for further education and training.
9. supplying the economic base and motivation for attending college.

Cooperative education and other education/work experiences reduce the number of failures and dropouts and facilitates the placement of students as they complete their college work.[2]

What does the business world expect from the community college? In a recent survey, representatives from business and industry stressed the need for preparing students in problem solving and analysis. A person going into the workplace today or in the future needs more than a narrow set of job skills which do not allow for movement from task to task or to a new situation. Business and industry people want community colleges to prepare students with job skills which include attitudes toward their place of employment. These job skills should include

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[1]Barry Heermann, Cooperative Education in Community Colleges (San Francisco: Jossey-Bass Publishers, 1973).

[2]Asa S. Knowles and associates, Handbook of Cooperative Education (San Francisco: Jossey-Bass Publishers, 1971).

economic awareness of a free enterprise system and the competitive aspects of business along with attitudes toward assignments. There should be stress placed on the importance of maintaining high standards of performance. Some type of work experience should be a part of the community college program. Levels of technical content and skill development should be upgraded and more advanced than high school; there should be more emphasis on remedial efforts to correct basic skill deficiencies. Through the community colleges, students need to acquire the ability and background to be able to transfer acquired knowledge to new work situations and to be able to add to that knowledge when necessary.[1]

The community college was given support by the president of International United Auto Workers (UAW) at the American Association of Community and Junior Colleges. The UAW workers have many needs and require a wide range of opportunities, many of which can be satisfied by expanding educational opportunities of the community colleges. Through cooperation, the community collges and labor can enter into a broad and cooperative partnership to provide relevant education for the world of work and also education for "broadening life's horizons" and improving the quality of citizenship."[2] The community colleges should have job-related curricula that includes training for career advancement and training for new careers. Community colleges are in a position to

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[1]Harlan D. Huston, "The Nature and Characteristics of Business Education and Training Offered by Business and Industry in a Metropolitan Area with Implications for Community Colleges" (Ph.D. dissertation, University of Northern Colorado, 1976).

[2]Leonard Woodcock, "Education for a New Age: Partnership with Labor," Community and Junior College Journal, May, 1975, pp. 15-20.

offer learning by teaching leadership skills to union members, retired citizens, minority groups and offer tools for participation in unions and community life. They can offer instruction in the understanding of our economy and sharpen the individual's insight into values, strengths, and weaknesses of our country.[1]

Dr. Marland, Jr., states that community colleges have responded to the needs of the students and have adjusted their programs to satisfy the wants and desires of those students, giving them what they want out of school. Through the community college, there has also been an increased commitment by the business sector in helping to link the school and the workplace. There are four factors involved in this commitment by the business community:

1. business enterprises have a self-serving interest in a good economic environment--this is largely dependent on good schools.
2. business looks to its future for market potential--they have everything to gain by the increased purchasing power implicit in generations going through the schools and colleges.
3. manpower needs--work habits and attitudes are a part of the career education design and employers are contributing their efforts to the advancement of this concept.
4. social responsibility--there are commitments by business to help meet a social need which serve no immediate short-term profit; it is a visible force labeled "altruism."[2]

The educational system, using the workplace as a component, should include knowledge and experience literally related to the world of work.

The community college has the flexibility to adapt their curriculum to allow students to make work experience directly relate to

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[1] Ibid.

[2] Sidney P. Marland, Jr., Career Education, A Proposal for Reform (New York: McGraw-Hill Book Company, 1974).

their academic major, to integrate the classroom study with employment and to base the curriculum on the principle that learning does not confine itself to academic achievement but is equally dependent upon practical experience. Curriculum must be flexible enough to include job development skills, attitudes, and values to help the individual live successfully in today's world.

The open-entry, open-exit philosophy and the open door of the community college may be the institutional answer to A. Toffler in Future Shock when he states, "Super-industrial education must therefore make provision for life-long education on a plug-in/plug-out basis." The rapid obsolescence of knowledge and the extension of the life span makes it clear that the skills learned in youth will be outdated at the time of old age.[1] What other institution so conveniently falls into the plug-in/plug-out concept needed for life-long education?

It is quite certain that the future will bring new sociological, educational, and technological developments. The cooperative task of education, business, labor, industry, and government will be how to select occupations requiring postsecondary education which are necessary, feasible, and acceptable. It is the mission of postsecondary vocational programs to help their clinetele select, prepare for, advance in, and retire from careers in a world shaped by technology.[2]

Statistics support the recommendation that postsecondary career programs be administered by the community colleges who are able and

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[1] Career Education: The State of the Scene (Washington, D.C.: Office of Career Education, 1974).

[2] Edwin L. Kurth, "Vocational Education in Postsecondary Schools--What's Ahead???" Journal of Industrial Teacher Education, Winter, 1974.

committed to serving the needs of postsecondary adults and youth.[1] These institutions have been an important innovator in emphasizing learning by doing--learning through actual experience--and have incorporated real-work experience into the academic curricula to include out-of-classroom work as a formal part of the curricula through cooperative education. The community college is the educational institution which has experienced the most rapid growth in students enrolled in cooperative education.[2]

The community college is, by its very philosophy, committed to serve all segments of the community; it is the logical choice to provide a service to meet an expanding phenomenon--people changing vocations throughout their life span. The community college is democratic, is adaptable to the wide range of student abilities, and possesses definite characteristics in support of this--it is because of where they are, what they are, and why they are.

Summary

The three major categories of review--career development, cooperative education, and the community college--have no distinct walls. Each fuses with the other to establish an educational concept. To be effective, career development must become a part of the curricula of the postsecondary educational institution. Career development is designed to include a wide range of learning--job skills, career information disbursement for making realistic career decisions, self

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[1] Report of the Advisory Committee on the Schaefer-Kaufman Recommendations Entitled Occupational Education for Massachusetts (Boston: Massachusetts Advisory Council on Education, 1970)

[2] K. Patricia Cross, "The Learning Society," College Board Review Spring, 1974, quoting in Bridging the Gap: A Study of Education-to-Work Linkages: Final Report of the State-Level Study in Career Education.

development, acquiring of positive work attitudes, job placement, the means to obtaining further education and training as needed, and guidance throughout the life of the individual. Cooperative education is included as a method of education and training in career development curricula. Students need curricula that will prepare them to live and work successfully in today's fast-changing world.

In the 1960's education was forced to reexamine its goals and objectives and through this reexamination came an appropriation of federal funds for cooperative education. Cooperative education and work experience programs have increased. There are now over 1,000 colleges offering cooperative education with 200,000 students, and it is estimated that by 1980 there will be 500,000 students enrolled.[1]

Through cooperative education, a student is able to reinforce his institutional learning by applying this knowledge in a real-world work situation. Cooperative education supports the concept that the four walls of an educational institution aren't the only places to learn; it mixes classroom and practical work experience; it represents a three-way partnership between the educational institution, the student and the workplace; it helps to bridge the gap between education and work; and, it helps make the transition from youth to adult worker smoother.

There are three organizational plans for administering the cooperative work experience which are flexible and easily fused into community college curricula. Each plan links on-campus instruction with work experience.

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[1] National Commission for Cooperative Education Purpose and Program (Boston).

The cooperative education students are trained in the workplace on up-to-date equipment which cannot be duplicated in the institution because of budget constraints. The business community profits by having employees who are knowledgeable about theory while at the same time producing goods and services. Cooperative education is a vehicle for forming closer bonds between the college and the community it serves; it is an effective means of achieving affirmative action in employment. Businessmen have a better insight into the capabilities and potential of the individuals who will lead our nation. It helps encourage the dropout by giving him relevant education and reduces the number of failures by facilitating job placement. Through joint effort, cooperative education can be an effective way to bridge the gap between education and work on which students rely for achieving active membership in the labor force.

The community colleges are institutions viewed by society as a key to a better life. One means of acquiring a better life is through additional training and education which prepares individuals for gainful employment and for advancement through the upgrading of skills. The community colleges have responded to this challenge by implementing curricula that is flexible and meets the needs of their heterogeneous population. The basic concepts of combining work and study influence and profit every aspect of postsecondary education. It mandates total institutional commitment with systematic planning, dedication of resources, various input strategies and staff development.

Community colleges have helped link the business sector to the educational sector through the establishment of cooperative work

experience programs; they have worked with labor in establishing relevant work experiences. Philosophical and operational patterns by the two-year community colleges help break down the lines of demarcation as they merge with business, labor, industry, and the government in support of cooperative education.

Postsecondary adults and youth, where there is a choice, will choose the community college as the institution that best serves their needs. This institution has been a strong advocate of learning by doing--of learning by actual experience. The combination of real-world experiences and academic experiences are incorporated into the educational curricula. The community college is a key component of a socio-political and educational phenomemon--that of life-long learning combining work and education in a mutually reinforcing experience.

CHAPTER III

PROCEDURES

This study was undertaken to identify the number of existing cooperative vocational education programs and to show the characteristics of the programs and the personnel responsible for their operation in postsecondary schools in the State of Colorado. The study was exploratory in nature and, therefore, does not have a fixed hypothesis.

Population

The geographical boundaries delimitation was confined to the State of Colorado. The 14 Colorado community-junior colleges, 10 area vocational-technical schools and 20 local school districts with adult vocational education programs established the 44 public institutions to form the total population. Names of the institutions included in the study (Appendix A) were obtained from the State Board for Community Colleges and Occupational Education.

Instrumentation

An initial letter (Appendix B) explaining the research was sent to the administrator or campus director of each postsecondary public institution in the State of Colorado (Appendix A). Accompanying this letter was a set of definitions (Appendix F) and Part I (Appendix C) of the survey instrument requesting preliminary information. The administrator was asked to complete and return Part I of the instrument. Upon

return of Part I, a second letter of explanation (Appendix D), a set of definitions, and Part II (Appendix E) of the survey instrument were mailed to each cooperative vocational coordinator identified by the administrator in Part I.

Collection and Analysis of the Data

By using the mailing technique, along with telephone contacts and interviews of preselected institutions, necessary data were collected. Responses from the survey were gathered, analyzed, summarized and presented in final form. The institutions used in the survey were coded for anonymity.

Pilot Study

A pilot study was conducted prior to the survey mailing. Three postsecondary campus administrators assisted in a preliminary test of Part I of the survey instrument, the accompanying definitions, and the letter of introduction. Their critiques and input proved to be extremely helpful. Part II of the survey instrument and the same definitions were also pretested by interviewing three cooperative vocational education coordinators. From the critiques on both Part I and Part II, as well as the definitions and letter of introduction, additional definitions were included and minor modifications made.

Summary

The study was to identify the number of existing cooperative vocational education programs in postsecondary schools in the State of Colorado along with identifying characteristics of the programs and the personnel involved in the operation of these programs.

The population consisted of 44 public postsecondary institutions--14 community-junior colleges, 10 area vocational-technical schools and 20 local school districts with adult vocational education programs.

The study data were collected through the use of a two-part survey instrument that had been pretested and modified for improvement of effectiveness.

Data collected were compiled, analyzed, and summarized from Part I and Part II of the survey instrument returned by the respondents. Data from telephone and personal contacts were also included. The data are presented in tables in subsequent chapters.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF THE DATA

Introduction

To identify and analyze the characteristics of the cooperative vocational education programs in Colorado at postsecondary institutions, questionnaires were mailed to 44 public institutions. These postsecondary institutions included 14 community-junior colleges, 10 area vocational-technical schools, and 20 local school districts with adult vocational education programs. The number of institutions responding to Part I of the survey instrument (Appendix C) are shown in Table 1.

TABLE 1

POSTSECONDARY INSTITUTIONS IN THE SURVEY OF ADULT COOPERATIVE VOCATIONAL EDUCATION PROGRAMS IN COLORADO

Institution	Total No.	No. Responding	Percent Responding
Community-Junior Colleges	14	14	100
Area Vocational Schools	10	8	80
Local School Districts	20	4	20
Total	44	26	59

From the responses received from the local school districts, it was impossible to identify any adult cooperative vocational education programs offered by these school districts. For this reason, the data presented includes only the community-junior colleges and the area vocational-technical schools in the State of Colorado. Additional information is presented on the community-junior colleges based on information furnished by the State Board for Community Colleges and Occupational Education. For anonymity, an alphabetic code was used in place of the actual names of institutions.

Survey data indicated that no area vocational-technical schools have a centralized cooperative education coordinator. There are 9 community-junior colleges with no centralized program coordinator and 3 community-junior colleges with a centralized cooperative education coordinator for all programs. Two community-junior colleges failed to respond to this question. The small number of centralized cooperative education program coordinators in the State at the postsecondary level may be a contributing factor to the discrepancies found in gathering valid program data.

The number of cooperative vocational education programs and the per quarter average headcount at the community-junior colleges is shown in Table 2. Only those programs identified as vocational education under the Vocational Education Act of 1963 as amended are included.

TABLE 2

COOPERATIVE VOCATIONAL EDUCATION PROGRAMS OFFERED BY COMMUNITY-JUNIOR COLLEGES IN COLORADO

Institution	Average Per Qt. Headcount 1975-76*	Number of Programs
J	458	0
K	744	4
L	1035	8
D	1302	4
N	1347	5
M	1391	2
E	1400	0
A	2948	7
C	3186	2
H	3978	4
B	4768	1
G	5202	3
I	5806	5
F	7641	5

*Based on Fall, Winter, and Spring Quarter enrollment figures from the State Board for Community Colleges and Occupational Education.

Table 2 indicates that the headcount at an institution does not determine the number of cooperative vocational programs offered. The third smallest community-junior college offers the largest number of cooperative vocational programs in the State.

The average age of community-junior college students at each institution is shown in Table 3.

TABLE 3

AVERAGE AGE OF STUDENTS ATTENDING
COMMUNITY-JUNIOR COLLEGES
IN COLORADO

Institution	Average Age of Students*
L	23
A	25
J	27
M	28
N	29
B	29
F	30
C	30
H	30
G	31
D	31
K	31
E	32
I	34

*Based on figures from the Colorado State Board for Community Colleges and Occupational Education.

The age breakdown of the community-junior college students in the State indicates that the students at Colorado institutions are representative of the average age of the community-junior college students in the United States.

Information presented in Table 4 was compiled from Part I and Part II of the survey instrument.

TABLE 4

COOPERATIVE VOCATIONAL EDUCATION PROGRAMS AT THE COMMUNITY-JUNIOR COLLEGES IN COLORADO

Institution	Number of Programs	Programs Reporting	Students Per Qtr. 1975-76	Students Fall Qtr. 1976	Percent of Change
A	7	4	38	83	+118
B	1	1	44	75	+ 70
C	3	2	35	127	+263
D	3	0	. . .	. . .	. . .
E	0	0	. . .	. . .	. . .
F	5	3	19	29	+ 53
G	3	3	19	13	- 32
H	4	4	69	26	- 62
I	5	0	. . .	. . .	. . .
J	0	0	. . .	. . .	. . .
K	4	0	. . .	. . .	. . .
L	8	6	82	110	+ 34
M	3	2	9	27	+200
N	4	4**	*	*	
Total	50	29	315	490	+ 56

*Information not given.

**Completed by cooperative education coordinator for all program areas.

The total number of cooperative vocational education programs offered by an institution was based on the compilation of the data in Part I of the survey instrument which was completed by the administrator at each institution. Upon receipt of Part I, it was found that some administrators simply stated that their cooperative education phase of vocational education programs was handled by "various instructors." Due to the lack of names of designated individuals as cooperative education coordinators, Part II was not mailed to these institutions.

The total number of mailings of Part II of the survey instrument is not documented for the following reasons:

1. Designated individuals were not listed in Part I.
2. There were cases where one instructor was handling more than one program area.
3. Part II was designed primarily for the reporting of information on the program with data on the background of the coordinator being secondary.
4. There was one instance where one cooperative education coordinator completed one copy of Part II for all cooperative education programs at that institution.

The number of programs reporting from each institution does signify the number of returns of Part II by cooperative education coordinators. With the exception of the number of programs, all data presented in Table 4 is based on the number of programs reporting.

Investigation showed that the community-junior colleges with the largest number of cooperative programs is operating with federal dollars funded under Title IV D of the Higher Education Act of 1965. This Act provided for 100 percent funding the first year with decreasing funds each year for a period of five years based on reapplication each year. An interested and qualified educator wrote a proposal for funds which implemented cooperative education at that institution.

Table 5 presents information similar to that found in Table 4 with the exception that it focuses on the area vocational-technical institutions. The information was gathered and compiled using the same procedure as explained for Table 4. Data presented are based on the number of programs reporting in Part II of the survey instrument.

TABLE 5

COOPERATIVE VOCATIONAL EDUCATION PROGRAMS AT THE AREA VOCATIONAL TECHNICAL SCHOOLS IN COLORADO

Institution	Number of Programs	Programs Reporting	Students Per Qtr. 1975-76	Students Fall Qtr. 1976	Percent of Change
A	2	1	26	26	0
B	0	. . .	. . .	. . .	. . .
C	1	1	2	10	+400
D	0	. . .	. . .	. . .	. . .
E	0	. . .	. . .	. . .	. . .
F	No response				
G	6	1	4	15	+275
H	6	3	61	145	+138
I	No response				
J	0	. . .	. . .	. . .	. . .
Total	15	6	93	196	+111

Area vocational-technical schools in the State of Colorado enroll both secondary and postsecondary students; therefore, data on headcount and student age were not gathered.

Table 4 and Table 5 show an increase in the number of students enrolled in cooperative vocational education for Fall Quarter, 1976. Area vocational-technical institutions show the greatest percent of increase with the community-junior colleges showing the highest number of students enrolled in cooperative vocational education programs.

Tables 6, 7, and 8 present data collected and compiled from Part II of the survey instrument. Some respondents failed to answer all questions; some failed to complete an entire page. For this reason, the total number of responses to individual questions differ. The tables are organized by categorizing the major questions presented in the survey instrument and which are set forth in the Statement of the Problem in Chapter I.

TABLE 6

BACKGROUND INFORMATION ON COLORADO POSTSECONDARY COOPERATIVE VOCATIONAL EDUCATION COORDINATORS

Question	No. of Responses by Category	Total No. of Responses
1. What length of time has program been in existence?		
1 to 5 years	11	
6 to 12 years	10	21
2. How long have you been a coordinator in this program?		
1 to 5 years	16	
6 to 12 years	6	22

TABLE 6--Continued

Question	No. of Responses by Category	Total No. of Responses
3. How many contact hours per week do you teach?		
1 to 5	2	
6 to 10	1	
11 to 15	7	
16 to 20	5	
Over 20	4	19
4. How many clock hours per week do you coordinate?		
1 to 5	7	
6 to 10	3	
11 to 15	4	
15 to 20	1	
Over 20	7	22
5. Are you a full-time coordinator		
Yes	9	
No	13	22
If you are not a full-time coordinator:		
a. Do you receive release time?		
Yes	7	
No	10	17
b. Do you receive extra compensation?		
Yes	9	
No	8	
6. During which hours do you coordinate?		
Day	19	
Night	6	
All	3	28

TABLE 6--Continued

Question	No. of Responses by Category	Total No. of Responses
7. What types of cooperative education training have you had?		
Course work	15	
In-service by institution	5	
In-Service by State Board for Community Colleges and Occupational Education	8	
In-service by teacher-training institutions	7	
Experience with another program	1	
On-the-job training	1	
Army	1	
School of hard knocks	1	

Implicit in this data is that the majority of coordinators average 11 to 15 teaching contact hours weekly, coordinate either 1 to 5 hours or over 20 hours per week and are not full-time coordinators.

Copies of organizational charts which accompanied some of the questionnaires showed only one institution indicating a position for a cooperative education coordinator responsible for all cooperative education at that institution. One institution indicated that the director of cooperative education reported directly to the president. In most other institutions, however, the cooperative education coordinator was responsible for only one program and operated independently, and sometimes anonymously.

TABLE 7

BACKGROUND INFORMATION ON COLORADO POSTSECONDARY COOPERATIVE VOCATIONAL EDUCATION PROGRAMS

Question	No. of Responses by Category	Total No. of Responses
1. Is cooperative education required?		
Yes	11	
No	8	19
a. What credit hours are required?		
Minimum	3 to 150 reported	
Maximum	6 to 800 reported	
b. Do you have sufficient training stations?		
Yes	10	
No	5	15
c. Do you accept unemployed students?		
Yes	13	
No	3	16
d. Are training stations found for unemployed students?		
Yes	14	
No	2	16
2. Is cooperative education offered during the summer quarter?		
Yes	15	
No	6	21
3. During which times is cooperative education available?		
Day	8	
Evening	1	
Both	11	20

TABLE 7--Continued

Question	No. of Responses by Category	Total No. of Responses
4. Is your institution used as a training station?		
Yes	8	
No	9	17
5. Are the following a part of cooperative education?		
Related class?		
Yes	11	
No	2	13
Introduction/Orientation session?		
Yes	9	
No	2	11
Follow-up session?		
Yes	8	
No	2	10
6. Do you screen students before acceptance?		
Yes	11	
No	5	16
7. Do you have a functioning Advisory Committee?		
Yes	13	
No	5	18
How many meetings per year?	Varied from 1 to 6	
8. In what geographical areas do you place students?		
Local	11	
State	7	
National	4	
International	2	24

The amount of credit hours allowed for cooperative education varies widely with institution. One of the reasons for the variance is that all cooperative education credit is not recognized as part of the number of credits required for an associate degree.

The majority of institutions offer some type of related class, introduction/orientation, and/or follow-up session.

Table 8 lists the most common problems related to the operation of a cooperative vocational education program as seen by cooperative education coordinators.

TABLE 8

MOST COMMON PROBLEMS AS RANKED BY POSTSECONDARY COOPERATIVE VOCATIONAL EDUCATION COORDINATORS IN COLORADO

Rank Order	Problem	No. of Responses
1.5	Heavy Teaching Load	10
1.5	Insufficient Coordinating Time	10
3	Distance to Travel	8
4.5	Administration Support Weak	6
4.5	Student's Schedule Inflexible	6
	Others not ranked:	
	Relationship with Veterans Administration	3
	FTE Funding	3
	Finding Coop Stations	3
	Relationship with other education/ work programs	2
	Community non-support	2

Incorporated in the number one problem of a heavy teaching load is funding patterns and methods of operation. Data indicates a vast difference in objectives, operation, coordination, credit, philosophy, terminology, reporting, etc. of cooperative vocational education programs at the various postsecondary institutions in the State. This supports information found in the review of the literature that cooperative education has no consistent structure, purpose, philosophy, or objectives.

Weak administrative support (Item 4.5) indicates that terminology is a significant factor even though a set of definitions had accompanied both parts of the questionnaire. The survey responses reflected items and applications significantly different from the concepts presented in the definitions. A breakdown in communications between administration and instructional personnel was a contributing factor brought out in interviews and visitations.

Underlying factors contributing to problems faced by coordinators brought out in reports at conferences, panel and group discussions, and informal interviews are the lack of leadership, coordination, and staff development in cooperative education at the postsecondary level. Teacher-training institutions emphasize the secondary level of cooperative education over the postsecondary level. A Guide for Cooperative Vocational Education, a handbook containing operational principles and procedures, prepared by the University of Northern Colorado, is used for teacher training. This handbook states the following question and answer:

> QUESTION: At what grade level are most Cooperative Vocational Education programs offered?

> ANSWER: Most of the cooperative vocational education programs at the secondary level which utilize the cooperative method are for twelfth grade students. Cooperative programs, however, are expanding downward to the ninth grade and upward into the junior/community colleges.[1]

This handbook contains information and forms for establishing and operating successful programs and basic information for strengthening established programs--all focusing on the secondary level.

Cooperative vocational education programs at the secondary level are funded through the Colorado Vocational Act and these school districts are partially reimbursed for equipment and instructional personnel at approximately fifty-percent level. There is no specific funding for cooperative vocational education programs at the postsecondary level.

Informal Data

Personal interviews, telephone follow-ups, attendance at the Colorado Postsecondary Education/Work Conference at the University of Northern Colorado in January, 1977, attendance at the Western Center for Cooperative Education in Denver in March, 1977, and informal questions and discussions with participants and survey respondents resulted in the following collection of informal data.

CASE 1: The assistant to the president of a multi-campus institution reported in an interview that he didn't realize there were cooperative education programs on one of his campuses.

CASE 2: When completing Part I of the survey instrument, the campus director of one institution checked three programs in the vocational area as having cooperative education but failed to list programs

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[1] Guide for Cooperative Vocational Education (Denver: State Board for Community Colleges and Occupational Education), p. 1:3.

currently operating in the academic area. As a follow-up, a second copy of Part I was sent to this same institution and was completed by the dean of vocational education who indicated five vocational programs operating with cooperative education.

CASE 3: An interview with a cooperative education coordinator who is in an administrative position and reports diredtly to the dean of instruction was never notified that his campus had received the survey form. He was also not informed of the accompanying invitation to attend the Colorado Postsecondary Education/Work Conference as a paid participant. Three surveys had been sent to the administrator of this campus along with two telephone calls requesting a representative for the conference. The cooperative education coordinator was unaware of this. This particular institution has a strong program which is supported by funds from a federal grant.

CASE 4: Part I of the survey instrument which had been completed by a director of vocational studies was followed up and of the six programs checked on the survey as having a cooperative education phase, only one was found to be in operation.

CASE 5: An interview with an instructor who coordinates cooperative vocational education students in a particular program brought out erroneous information given him by his supervisor that no cooperative vocational education student could be fired from his/her training station. Another instructor-coordinator did not know what a training plan was.

CASE 6: Part II of one survey showed one instructor-coordinator having students on cooperative vocational education assignments at the same time he was teaching another class which made it impossible for him to visit students on the job.

CASE 7: Follow-up telephone calls and questionnaires indicated that the term "cooperative education" was used by the respondents to indicate both "paid" and "non-paid" work. Health Occupations Programs are considered by many has having a "cooperative phase" because they meet all cooperative education standards with the exception of "paid." It appears that because of the type of training involved at the medical and health institutions who aid in the student training, that "pay" is not feasible.

Summary

Data compiled from administration and instructional personnel indicate inconsistencies. Personnel involved in the administration of an institution or vocational programs and instructional personnel responsible for direct operation of cooperative education do not function under the same terminology, nor is there a flow of communication between the two. Survey data collected does not present a complete or accurate analysis of cooperative vocational education at postsecondary institutions in the State of Colorado. Informal data gathered from personal interviews, conferences, workshops, as well as contacts with cooperative education leaders, representatives of business, industry, labor, government, legislators, Colorado Department of Education, Ohio Department of Education, Colorado State Board for Community Colleges and Occupational Education, and other resource persons has enhanced the interpretation and analysis of the findings of the study.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study supplies information about adult cooperative vocational education programs in Colorado postsecondary institutions. The study can assist postsecondary administrators and instructors in implementing and expanding effective cooperative vocational education programs at their institutions, as well as providing information on other programs operating in the State.

The review of literature established cooperative education as a viable method for training students to enter the world of work and as an educational process which is responsive to changes in society and career opportunities. Enrollments in cooperative education programs have increased, and it is estimated that this increase will continue as federal appropriations support and strengthen programs. Postsecondary youth and adults tend to choose the community colleges as the institutions that can best serve their needs based on the philosophical and operational patterns which break down the lines of demarcation as they merge with business, labor, industry, and government in support of cooperative education.

Conclusions

In examining the historical background and the characteristics of cooperative vocational education in the State of Colorado, there

appears to be some definite possibilities for expanding, establishing, and coordinating cooperative education which postsecondary educators might consider. The study indicates certain weaknesses, strengths, and possible avenues for exploration.

First, there is no agreement on common terminology and definitions. Failure to arrive at operational terminology and definitions has caused communications to breakdown within institutions and among all institutions within the State. This breakdown in communications goes beyond the educational institutions into industry, business, and labor, as well as federal and state agencies--all of those involved in cooperative education.

The evaluation report from the National Conference on Cooperative Vocational Education in 1973 disclosed that "failure to communicate the nature and intent of cooperative education is the principal barrier to expansion" of this activity.[1]

Second, regular FTE (full-time equivalent student) funding is a deter ment to expansion and implementation of cooperative education programs. There is no specific funding for postsecondary cooperative vocational education programs in the Colorado State Plan for Vocational Education, Fiscal Year 1976. This indicates a lack of support and commitment by the regulating agency. With the current funding patterns, an administrator can generate more FTE by hiring a full-time instructor for a traditional course or class.

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[1]Memorandum from Marion R. Craft, April 14, 1976, to Dr. Richard E. Carlson, Director of the Division of Vocational and Technical Education, U.S. Office of Education.

Closely tied with funding is the faculty workload policy of each institution. Many institutions have expected faculty to expend energies on a volunteer basis in support of cooperative education.

Third, there is little visible institutional support for cooperative vocational education programs.

Fourth, the role of coordinator or director of cooperative education has not been defined, nor the duties and responsibilities of the position clearly stated. The study showed vast differences in the role of the cooperative education coordinator.

Fifth, the study indicated that most postsecondary institutions in Colorado have cooperative education programs which are decentralized both administratively and operationally.

Sixth, there has been no organization of well-informed leaders within the State to promote and coordinate postsecondary cooperative vocational education. There has been little, if any, state agency or teacher-training institutions offering training for cooperative education coordinators at the postsecondary level. Coordinators are operating with no guidelines or leadership and find themselves functioning with inadequate and incorrect information.

Recommendations

Recommendations and possible avenues for exploration based on the results of the study are as follows:

First, there is a need to agree on terminology and definitions so everyone is operating from the same base or frame of reference.

In considering definitions for cooperative education, it is also necessary to include other education/work programs. Mrs. Marion R. Craft,

Education Program Specialist, Postsecondary and Adult Occupational Programs Branch, Division of Vocational and Technical Education, U.S. Office of Education, has recommended the following official definition of education/work programs:

> . . . an umbrella term to describe a variety of arrangements, either paid or unpaid, whereby students are involved in real work environment. It includes the cooperative education student who is receiving financial support to continue his studies, and the work experience student who has a learning experience in a work environment.[1]

Second, there must be a change in the funding pattern to support cooperative vocational education. Specific funding for postsecondary cooperative vocational education needs to be made a part of the Colorado State Plan for Vocational Education. This would endorse and promote the postsecondary cooperative vocational education concept by the regulating agency and do much to strengthen existing programs and aid in implementing new programs.

Third, the workload policy needs to be examined and modified with regard to instructional personnel responsible for the operation of a cooperative education program. With the impetus of collective bargaining, this becomes an extremely critical area that can no longer be ignored. Adequate funding can provide a systematic approach to this problem. Fragmented volunteer efforts will no longer support a cooperative education program that is responsive to human needs and the education and training necessary for career development.

Fourth, provision should be made for research and development for improving and advancing cooperative education along with a systematic

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[1] Ibid.

method for dissemination of information. An effective method of evaluating cooperative education programs also needs to be provided on a continuing basis.

Fifth, there needs to be a philosophical statement that is clearly stated and understood as to the mission of that institution as it applies to cooperative education and career development. As part of this support there needs to be strong administrative leadership, coordinated curriculum, instructor-coordinator support and leadership, student support and participation, as well as support and participation of the community served by the institution.

Sixth, is the need for a combination of a centralized and decentralized organizational pattern; centralization of administration to allow for accountability and decentralization for program operations.

Seventh, is the need to define the roles of those responsible for the administration and operation of cooperative education. Along with role definitions is the need for training and workshops for postsecondary level cooperative education. Broad guidelines and information needs to be agreed upon and made available.

Eighth, is a need for a nucleus of organized well-informed leaders within the State to promote cooperative education. A project funded under Part C of the Vocational Education Act of 1963 as amended provided leadership and monies for the first Colorado Postsecondary Conference on Education/Work Programs. Other conferences and workshops have been held in the State during the 1976-77 year which have provided leadership training. From these conferences and workshops, there has developed a working nucleus of leaders who are currently promoting

postsecondary cooperative education in the State. New proposals have been written under Title 8 for federal funds to implement new programs at postsecondary institutions as well as proposals for extending the funding in support of programs already in operation. The Graduate Vocational Teacher Education Department at the University of Northern Colorado is sponsoring a workshop on Postsecondary Cooperative Education during Summer Quarter, 1977. Two other postsecondary institutions have scheduled or plan to schedule workshops for training and promoting cooperative education during 1977.

APPENDIX A

INSTITUTIONS INCLUDED IN THE SURVEY

APPENDIX A

INSTITUTIONS INCLUDED IN THE SURVEY

Colorado Community Junior Colleges

Aims College

Arapahoe Community College

Colorado Mountain College (East)

Colorado Mountain College (West)

Colorado Northwestern Community College

Community College of Denver (Auraria)

Community College of Denver (North)

Community College of Denver (Red Rocks)

El Paso Community College

Lamar Community College

Morgan Community College

Northeastern Junior College

Otero Junior College

Trinidad State Junior College

Area Vocational Technical Schools

Arapahoe-Douglas County Area Vocational School

Aurora Vocational Technical Center

Boulder Valley Area Voc-Tech Center

Delta-Montrose Area Voc-Tech School

Emily Griffith Opportunity School

Larimer County Voc-Tech Center

Marvin Knudson Area Vocational School

APPENDIX A--Continued

Mesa College Area Vocational School

San Juan Basin Area Vocational School

San Luis Valley Area Vocational School

Local School Districts with Adult Vocational Education Programs

Branson School District 82

Canon City School District RE-1

Career Enrichment Park

Delta County School District 50

Eaton School District

Fort Morgan School District

Granada School District

Haxtun School District

Holyoke School District

Jefferson County School District R-1

Kim School District

Lamar School District

McClave School District

Meeker School District

Pawnee High School

Rifle High School

Southeast Metropolitan Board of Cooperative Services

Wiggins School District

Wiley School District

Woodlin School District

APPENDIX B

INITIAL LETTER REQUESTING INFORMATION

Dear

Enclosed is an abstract of a project which has been funded directly by USOE to Graduate Vocational Teacher Education at the University of Northern Colorado. The project is entitled "Adult Vocational Education and Related Activities."

Three studies have been established in order to provide for closer cooperation for vocational education between postsecondary schools and the community--business, industry, and labor. It is our goal to gather background information at the postsecondary level on the education/work programs that are presently in operation. To obtain first-hand information, we ask that you complete and return the enclosed questionnaire. From your responses on the questionnaire, we will in turn contact your selected personnel for information and input. We also hope to visit as many schools as possible within the time limitation.

From the enclosed goldenrod abstract you can see that there are three major thrusts to the project. Thrust Two involves a Conference to be held at the Holiday Inn in Greeley from January 25 through January 29. This conference will be held in conjunction with the UNC Mid-Year Conference. The title of the Conference is POSTSECONDARY EDUCATION CONFERENCE ON EDUCATION/WORK PROGRAMS and the purpose of the Conference is to bring together national and state leaders in postsecondary education/work programs with Colorado administrators and education/work educators so that all can share their knowledge and expertise. Part of the funding for this project is to be used for 32 paid participants from postsecondary institutions in Colorado. The 32 paid participants will be administrators of postsecondary education/work programs. The enclosed green form asks you for conference participant nominations. Please complete the pink form and the questionnaire based on the attached definitions, and mail them both back to us in the self-addressed, postage paid envelope.

Thank you for your time and help. If you have any questions, please call Edna Peart at 351-2941. We look forward to hearing from you, and we would appreciate your responses by November 21, 1976.

Sincerely,

Anita T. Salazar
Research Associate

Charlene Collins
Research Associate

Enclosures: Abstract
Questionnaire
Conference Information
Application Form for Conference
Self-Addressed Envelope

APPENDIX C

PART I OF THE SURVEY INSTRUMENT

PART I--GENERAL INFORMATION ADMINISTRATION
COLORADO POSTSECONDARY
VOCATIONAL COOPERATIVE EDUCATION SURVEY

INSTITUTION	ADMINISTRAROR
STREET	TITLE
CITY STATE ZIP	TELEPHONE NUMBER EXTENSION

If the above information is not correct, please make the necessary changes.

Check the system on which your institution operates: _____Quarter
_____Semester

Do you have a centralized cooperative education coordinator for all programs? _____Yes _____No

If YES, _____ _____
Name of Coordinator Title

Please complete the following:

Program	Check if have program	Check if have Coop Ed Phase	Name of Coordinator	Length of Contract
Agriculture	_____	_____	_____	_____
Business & Office	_____	_____	_____	_____
Distributive Education	_____	_____	_____	_____
Health Occupations	_____	_____	_____	_____
Consumer Home Ec.	_____	_____	_____	_____
Occupational Home Ec.	_____	_____	_____	_____
Technical Education	_____	_____	_____	_____
Trade and Industrial	_____	_____	_____	_____

Please list any other cooperative education programs (vocational or non vocational) you have in your institution.

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Please list the name and title of other individuals who are involved in other Education/Work Programs (Job Placement Officer, Financial Aid Officer, Work Study Coordinator, etc.)

NAME	TITLE
_____	_____
_____	_____
_____	_____

Please enclose with the questionnaire: (1) a copy of a job description for each of the above individuals; (2) an organizational chart for your institution. Thank you.

Completed by: _____ _____
Name Title

_____
Date

APPENDIX D

LETTER TO COOPERATIVE VOCATIONAL EDUCATION COORDINATORS

November 30, 1976

has been previously contacted by us concerning Cooperative Education at the Postsecondary level. was sent a copy of the enclosed abstract along with a brief explanation concerning the Adult Vocational Education Research and Development Project.

As part of our responsibility for the project, we have done extensive research on cooperative education at the postsecondary level, and we now need information on what is being done in the State of Colorado. Information compiled from the enclosed survey sheets will provide the background for the "Postsecondary Education Conference on Education/ Work Programs" to be held at the Holiday Inn in Greeley from January 25 through January 28, 1977.

It is extremely important that we have information on your program and your input concerning postsecondary cooperative education. Please take a few minutes and complete the survey form. A self-addressed, stamped envelope is enclosed for your convenience.

Thank you for your help and time. We will be mailing you more information concerning the Conference within the next few weeks. It is our hope that you will be able to attend the Conference and share your ideas with other persons involved in postsecondary cooperative education throughout Colorado.

Sincerely,

Anita T. Salazar
Research Associate

Charlene Collins
Research Associate

dde
Enclosures: Brochure
Abstract
Survey form
Self-addressed envelope

P.S. If you have any questions, please call Dr. Louise J. Keller at 351-2941. We look forward to receiving your survey before your Holiday break.

APPENDIX E

PART II OF THE SURVEY INSTRUMENT

U N C
PART II--TEACHER COORDINATOR
COLORADO POSTSECONDARY
VOCATIONAL COOPERATIVE EDUCATION SURVEY

Please print or type the following:

_____ Name of Institution

_____ Program Title

_____ Name of Coordinator

____ Total students in the Program for 1975-6 school year (excluding summer session)

Please check: ___Quarter system
___Semester system

____ Total students in the Program for Fall Term, 1976

A. Coordinator Information--Please circle one response for each of the following:

1. How many years has this program been in existence? 1 2 3 4 5 6 7 8 9 10

2. How many years have you been a coordinator in this program? 1 2 3 4 5 6 7 8 9 10

3. How many contact hours per week are you teaching? 1-5 6-10 11-15 16-20 over 20

4. How many clock hours per week do you coordinate? 1-5 6-10 11-15 16-20 over 20

5. Are you a full-time coordinator: Yes No
If NO,

   a. Do you receive release time? Yes No

   b. Do you receive extra compensation? Yes No

6. During which hours of the day do you coordinate? Day Night Graveyard (12 pm-7 am) All

7. Please check the cooperative education training you have had.

   a. Course work ____

   b. In-service provided by your institution ____

c. In-service provided by the State Board for Community Colleges and Occupational Education _____

d. In-service provided by teacher-training institutions _____

e. Other (please specify)_____

B. Program Information

1. Is cooperative education a requirement in this program? If NO, proceed to 2; if YES, answer the following:

   a. How many credit hours of cooperative education are required? ___Maximum ___Minimum

   b. Do you have sufficient training stations? Yes No

   c. Do you accept students who are unemployed? Yes No

   d. Do you find training stations for unemployed students? Yes No

2. Do you have cooperative education during the summer term? Yes No

3. During which times do you offer a cooperative education? Day Evening Both

4. Is your institution used as a training station by your students? Yes No

5. Do you offer the following as part of cooperative education?

   How many clock hours does this class meet per term? _____

   a. Related class Yes No

   b. Introduction or orientation session? Yes No

   c. Follow-up session? Yes No

   d. Other (please specify)_____
   Name of Class

6. Do you screen students before accepting them in cooperative education? Yes No

7. Do you have a functioning Advisory Committee for your program? Yes No

   How many meetings are held per year? _____

8. In what geographical area do you place students? Local State National International

C. General Information

1. As a coordinator for your program, please check your five most common problems.

   a. Distance to travel _____
   b. Heavy teaching load _____
   c. Insufficient coordinating time _____
   d. Lack of interested students _____
   e. Lack of trained students _____
   f. Administration support weak _____
   g. Faculty support weak _____
   h. Student's schedules inflexible _____
   i. Finding coop students _____
   j. Community non support _____
   k. Advisory Committee non support _____
   l. Business exploiting students _____
   m. Evaluation of students _____
   n. Relationship with Veterans Administration _____
   o. Relationship with other education/work programs _____

2. Please check if you incorporate the following forms in your cooperative education program.

a. Student evaluation form _____

b. Student journal or diary _____

c. Training plan or learning objectives _____

d. Instructor evaluation form _____

e. Coop education guidelines or syllabus _____

f. Training agreement between institution and employer _____

g. Related course outline and objectives _____

h. Coop coordinator job description _____

i. Promotion brochures or materials _____

j. Final report or summary report _____

k. Coordinator visitation form _____

l. Other (please specify)_____

_____

D. Miscellaneous

For better coordination of programs, we are asking that you send us copies of the forms you checked above in Section c, No. 2.

1. The above forms are enclosed. Yes No

2. I would like to have a copy of this study. Yes No

Additional Comments:_____

_____

_____

_____

Designed by: Anita T. Salazar and Charlene Collins

November, 1976

APPENDIX F

TERMS AND DEFINITIONS

TERMS AND DEFINITIONS

POSTSECONDARY

Public supported institutions which serve adult learners and are classified as:

(a) Junior-Community Colleges
(b) Area Voc-Tech Schools
(c) Local school districts with adult vocational education programs

For the purpose of this project higher education is not included.

ADULT

Any individual beyond the age of compulsory attendance who is not attending full-time public school. In Colorado this is age 16 or over.

EDUCATION/WORK PROGRAMS

COOPERATIVE VOCATIONAL EDUCATION AND COOPERATIVE EDUCATION PROGRAMS

An instructional process which integrates the students' occupational preparation with a work-related experience. The purpose of Cooperative Vocational Education is to prepare students for specific areas of employment. The following criteria identify this educational process:

(a) Institutional approved
(b) Classroom instruction
(c) Distinct education/work related
(d) Paid employment
(e) Specific job focus
(f) Cooperative Training Agreement and Plan

WORK-STUDY

This is a school/college program designed to provide financial assistance through part-time employment with public non-profit employers. It is designed for students who require such aid in order to enter or continue their education in a vocational education program. The part-time employment may or may not be related to the students' occupational objectives.

WORK EXPERIENCE	An arrangement recognized by the school/college whereby students undertake employment experiences, generally paid, for a predetermined purpose. The work experience usually is not structured to meet an educational objective. The purpose of this arrangement is to allow students to achieve outcomes, generally self-determined, as an alternative to the regular school environment.
WORK EXPOSURE	A limited involvement program which provides students an opportunity for formal observation of career settings. The program provides students an opportunity for structured observations of on-site situations as well as association with community employers/employees and professional/ trade/service organizations.

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VITA

Charlene R. Collins

Personal Data. Born and raised in Montana. Married F. Donald Collins in Hardin, Montana. Daughters: Colette and Candace.

Education. Attended public schools in Hardin, Montana. Graduated from the University of Montana, Missoula, with honors, with a B.A. in Education and a B.S. in Business Administration. Graduated from the University of Northern Colorado with a Master of Arts in Curriculum and Instruction.

Experience. Previously employed as a secretary with The Firestone Tire & Rubber Company and Standard Oil Company of New Jersey; as a teacher in secondary and postsecondary private and public schools in Montana and Colorado. Am currently an instructor at the Community College of Denver, Red Rocks Campus, Business Occupations Division. Assignments have consisted of teaching, administrative work, and a coordinator for the Audio-Visual-Tutorial Center. Am a consultant for Media Systems Corporation and for the 1976-77 school year have been a research associate for the University of Northern Colorado on an education/work project.

Professional Organizations. American Vocational Association, Colorado Vocational Association, Colorado Business Education Association, Kappa Delta Pi, Phi Delta Kappa, Western Association of Cooperative and Work Experience Educators, and Colorado Education Association.